

REMARKS

By this amendment, claims 23-33 have been amended. Accordingly, claims 23-33 are currently pending in the application, of which claims 23, 27 and 30 are independent claims.

Entry of the Amendments and Remarks is respectfully requested because entry of Amendment places the present application in condition for allowance, or in the alternative, better form for appeal. No new matters are believed to be added by these Amendments.

In view of the above amendments and the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Rejections Under 35 U.S.C. § 112, first paragraph

Claim 33 stand rejected under 35 U.S.C. § 112, first paragraph because the specification fails to describes the “sub-pixels” . Applicants respectfully traverse this rejection for at least the following reasons.

In this response, claim 33 has been amended to read “each pixel electrode further includes a second pixel electrode, and the gate line is arranged between the first pixel electrode and the second pixel electrode in each pixel”. An example of this claimed feature is shown in Fig. 15 of the present application, in which each pixel has the first pixel electrode overlapping the corresponding storage electrode to form the storage capacitance and the second pixel electrode separated from the first pixel electrode by the gate line.

Thus, it is submitted that claim 33 complies with the written description requirement. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 112, first paragraph rejection of claim 33.

Rejections Under 35 U.S.C. § 102

Claims 27-29 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U. S. Patent No. 5,926,161 issued to Furuhashi, *et al.* (“Furuhashi”). Applicants respectfully traverse this rejection for at least the following reasons.

In this response, the recitation “common electrode line” has been replaced with --storage electrode line-- for clarification. As well known, a liquid crystal capacitance is formed between a pixel electrode and a common electrode (e.g., counter electrode). A storage capacitance is formed between a pixel electrode and a storage electrode in addition to the liquid crystal capacitance.

With this in mind, amended independent claim 27 recites:

“...
a plurality of storage electrode lines extending in the column direction and transmitting storage voltages, *the storage electrode lines and the data lines being alternately arranged*; and
a plurality of pixels, each of the pixels including a pixel electrode, *each storage electrode line intersecting the pixel electrodes corresponding thereto*,
wherein a *storage capacitance of each pixel is formed between the pixel electrode and the storage electrode line corresponding thereto.*”

In this regard, Furuhashi is directed to an in-plane switching (IPS) type LCD device, in which a pixel electrode and a common electrode (i.e., counter electrode) are formed on the same

substrate. For example, Fig. 13 shows the pixel electrode 703 and the counter electrode 1609 is formed on the same substrate 402 and the liquid crystal capacitance is formed therebetween.

However, Furuhashi does not disclose *a storage electrode line* for forming *a storage capacitance*, which is different from the liquid crystal capacitance formed between the pixel electrode 703 and the counter electrode 1609. Also, in Fig. 12 of Furuhashi, there is no counter electrode formed between the data lines D_n and D_{n+1} . Thus, Furuhashi fails to disclose “the storage electrode lines and the data lines being alternately arranged”, as claimed.

For these reasons, it is respectfully submitted that claim 27 is patentable over Furuhashi. Claims 28 and 29 that are dependent from claim 27 would be also patentable at least for the same reasons. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 102(b) rejection of claims 27-29.

Rejections Under 35 U.S.C. § 103

Claims 23-26 and 30-32 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Furuhashi. Applicants respectfully traverse this rejection for at least the following reasons.

With respect to claims 23-36, amended independent claim 23 recites “a plurality of storage electrode line pairs extending in the row direction”. As previously mentioned, Furuhashi fails to describe *a storage electrode line* itself. Also, the counter electrodes 1609 and 1610 are extending in the column direction. Thus, the structure disclosed in Furuhashi is substantially different from the subject matter of claim 23. No secondary reference has been introduced to cure the deficiency from Furuhashi. For these reasons, it is submitted that claim 23 is patentable

over Furuhashi. Claims 24-26 that are dependent from claim 23 would be also patentable at least for the same reasons.

With respect to claims 30-33, amended independent claims 30 recites “a plurality of storage electrode lines extending in the first direction and transmitting storage voltages, the storage electrode lines and the gate lines being alternately arranged”. In this regard, as previously argued, Furuhashi fails to describe *a storage electrode line* itself. Also, the counter electrodes (1609, 1610) and the data lines (D_n , D_{n+1}) are not alternately arranged. Thus, the subject matter of claim 30 is substantially different from Furuhashi. No secondary reference has been introduced to cure the deficiency from Furuhashi. For these reasons, it is submitted that claim 30 is patentable over Furuhashi. Claims 31-33 that are dependent from claim 30 would be also patentable at least for the same reasons.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 23-26 and 30-32.

Other Matters

In this response, claims 23-33 have been amended solely for clarification, better wording and informality correction purposes. This amendment is not made for the purpose of avoiding prior art or narrowing the claim inventions since the cited reference is very distant from the claimed invention, as mentioned above.

CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,



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